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10/634,561	08/05/2003	Michael J. Britton	CM05023H	6018
22917 7590 10/24/2008 MOTOROLA, INC. 1303 EAST ALGONQUIN ROAD IL01/3RD SCHAUMBURG, IL 60196				
EXAMINER				
CHERY, DADY				
ART UNIT		PAPER NUMBER		
2416				
NOTIFICATION DATE		DELIVERY MODE		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

Docketing.US@motorola.com

Office Action Summary

Application No.

10/634,561

Applicant(s)

BRITTON ET AL.

Examiner

DADY CHERY

Art Unit

2416

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 March 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

This communication is responsive to the amendment filed on 03/31/2008.

Response to Arguments

1. Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-4, 7-9, 12-13, and 15 –18, are rejected under 35 U.S.C. 103(a) as being unpatentable over Marsh et al. (US Patent 7,209,447, hereinafter Marsh) in the view of Taketsugu and further in view of Zimmermann et al. (US Application 2001/0053139, hereinafter Zimmermann).

Regarding claim 1, Marsh discloses a method comprising the steps of:

at a subscriber:

transmitting data on a data channel; during the step of transmitting, tracking a number of collisions on the data channel until the number of collisions reaches a threshold value; and when the number of collisions reaches the threshold value, transmitting a reassignment request to move to a new data channel (Abstract). Where the monitoring of the level of congestion on the transmission and the error rate data transmission is considered as tracking the number of collision and the rerouting to new path is considered as selected a new data channel.

Marsh fails to mention if the tracking the number of collision is done at the subscriber.

However, Taketsugu teaches a method to select a new data channel when the packet collisions exceed a critical value as described the instant application (Fig. 5 and Col. 12, lines 36 – 39).

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to select a new channel when the number collisions exceed the threshold value for the purpose of decreasing the rate error of the packet received at the base station (Abstract).

Mash in combination with Taketsugu fails to teach until the number of collisions reaches a threshold value indicating that the subscriber is unable to acquire sufficient bandwidth on the data channel due to collisions with other transmitting subscribers on the data channel and hen the number of collisions reaches the threshold value thereby indicating that the data channel is fully utilized, transmitting a reassignment request to move to a new data channel.

However, Zimmermann teaches until the number of collisions reaches a threshold value indicating that the subscriber is unable to acquire sufficient bandwidth on the data channel due to collisions with other transmitting subscribers on the data channel and hen the number of collisions reaches the threshold value thereby indicating that the data channel is fully utilized, transmitting a reassignment request to move to a new data channel (Page 1, [0011] – [0013], Page 2, [0023] - Page 3, [0029] if a **handover condition is met, i.e. if the quality on the uplink and/or downlink of the**

channel pair presently carrying the call connection has deteriorated below a predetermined threshold. If the handover condition is met, then step S40 determines if there is more than one member in the group, and if there is only one, step S44 performs the switching to this only member. On the other hand, if there is more than one member, step S41 determines the best member, in accordance with a predetermined useful or desirable ranking scheme. Then, step S42 switches to the best member. Finally, the system returns to the normal control in step S43.)

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Zimmermann into the teaching of marsh for the purpose of determine interference strength values during a call connection for one or more channel pairs other than the channel pair momentarily carrying a call connection, such that a group of candidate channel pairs for potential channel switching is performed **(Abstract)**.

Regarding claim 2, Marsh discloses all the limitation of claim except *the reassignment request is transmitted to a central processor*.

However, Taketsugu teaches the reassignment is done by the base station, which is considered having a central processor (Col. 7, lines 24 – 27).

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to transmit the reassignment to a central processor for an efficiency control of the error rate **(Abstract)**.

Regarding claim 3, Marsh discloses all the limitation of claim 3 except *the reassignment request is transmitted on a control channel*.

However, Taketsugu discloses the reassignment request is transmitted on a control channel (Abstract). The base station responses to user request on the control channel (control mode) when the base receives packets f with a high error rate due to collision as described by the instant application.

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the control channel for reassignment request for the purpose of decreasing error rate in the transmission packet due to collision (Abstract).

Regarding claim 4, Marsh discloses all the limitation of claim *except the step of transmitting any remaining data on the new data channel upon receipt of a reassignment grant*.

However, Taketsugu teaches a method for the mobile station to shift to a polling access when the data rate exceeds a predetermined threshold (Col. 4, lines 47 –50). Then the mobile select a new transceiver (channel) to send its packet (col.4, lines 59 – 65). This is substantially the same function of the instant application.

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to send any remaining data upon selecting the new channel for efficiency flow of control (Col. 4, lines 59 –67).

Regarding claim 7, Marsh discloses a *method comprising the steps of: receiving a reassignment request from a subscriber to move from a first data channel; and upon*

receipt of the reassignment request, assuming that the first data channel is loaded (Col. 5, lines 13 –44).

Marsh fails to mention if a *reassignment request from a subscriber*.

However, Taketsugu teaches a method to select a new data channel when the packet collisions exceed a critical value as described the instant application by a subscriber (Fig. 5 and Col. 12, lines 36 – 39).

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to select a new channel when the number collisions exceed the threshold value for the purpose of decreasing the rate error of the packet received at the base station **(Abstract)**.

Marsh in combination of Taketsugu fails to teach the subscriber is unable to acquire sufficient bandwidth on the first data channel.

However, Zimmermann teaches the subscriber is unable to acquire sufficient bandwidth on the first data channel **(Page 1, [0011] – [0013], Page 2, [0023] - Page 3, [0029] if a handover condition is met, i.e. if the quality on the uplink and/or downlink of the channel pair presently carrying the call connection has deteriorated below a predetermined threshold. If the handover condition is met, then step S40 determines if there is more than one member in the group, and if there is only one, step S44 performs the switching to this only member. On the other hand, if there is more than one member, step S41 determines the best member, in accordance with a predetermined useful or desirable ranking scheme.**

Then, step S42 switches to the best member. Finally, the system returns to the normal control in step S43.).

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Zimmermann into the teaching of marsh for the purpose of determine interference strength values during a call connection for one or more channel pairs other than the channel pair momentarily carrying a call connection, such that a group of candidate channel pairs for potential channel switching is performed **(Abstract)**.

Regarding claim 8, Marsh discloses *the steps of: comparing an incoming data rate to a value, wherein the incoming data rate is measured by the central processor at the time the subscriber requested reassignment; and if the incoming data rate is significantly lower than the value, determining that the first data channel is not loaded* (Col. 5, lines 17 – 34).

Regarding claims 9 and 13, Marsh discloses *the value is predetermined* (Col. 5, lines 39 –42).

Regarding claim 12, Marsh discloses *the method further comprising the steps of: comparing an incoming data rate to a value, wherein the incoming data rate is measured by the central processor at the time the subscriber requested reassignment; and if the incoming data rate is not significantly lower than the value, determining that the first data channel is loaded* (Col. 5, lines 17 –39).

Marsh fails to mention is method data rate is measured by the central processor.

However, Taketsugu teaches the data rate is measured by the base station, which is considered having a central processor (Col. 7, lines 24 – 27).

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to transmit the reassignment to a central processor for an efficiency control of the error rate (Abstract).

Regarding claim 15, Marsh discloses *the method further comprising the step of reassigning the subscriber to a new data channel* (Abstract).

Regarding claim 16, Marsh discloses all the limitations of claim 16 except; the new data channel is determined not to be loaded.

However, Taketsugu discloses a method when the error rate is above a threshold to select a new data channel, which implies the new channel, is not loaded (fig. 6, items 600 and 601, Fig. 7, items 302 and 700 and Col. 7, lines 24 – 37).

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Taketsugu into the teaching of Marsh for the purpose of decreasing error rate in the transmission packet due to collision (Abstract).

Regarding claim 17, Marsh discloses all the limitations of claim 17 except *the step of reassigning the subscriber to the first data channel.*

However, Taketsugu discloses *the step of reassigning the subscriber to the first data channel* (Col. 12, lines 36 – 39). It is inherent to reassign the first available channel.

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Taketsugu into the teaching of Marsh for the purpose of decreasing error rate in the transmission packet due to collision (Abstract).

Regarding claim 18, Marsh discloses all the limitations of claim 17 except *the step of sending a busy signal to the subscriber when all data channels are determined to be loaded*

However, Taketsugu discloses *the step of sending a busy signal to the subscriber when all data channels are determined to be loaded* (Col. 4, lines 24 – 29). Where the base sends the busy signal to the subscriber when all the forward channels are loaded.

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Taketsugu into the teaching of Marsh for the purpose of decreasing error rate in the transmission packet due to collision (Abstract).

6. Claims 5, 6, 10, 11 and 14, are rejected under 35 U.S.C. 103(a) as being unpatentable over Marsh in the view of Taketsugu as applied to claim 1 above, and further in view of Johnson.

Regarding claim 5, Marsh in the view of Taketsugu discloses all the limitations of claim 5 except, *the threshold value is known a priori*.

However, Johnson teaches *the threshold value is known a priori* (Col.4, lines 39 – 45). The threshold value is set by the user base on certain conditions that already known by the user.

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to consider the threshold value as known a priori in order to increase the network throughput when the collision is below the threshold (Abstract).

Regarding claim 6, Marsh in the view of Taketsugu discloses all the limitations of claim 5 except; *the threshold value is user configurable*.

However, Johnson teaches *the threshold value is user configurable* (Col. 4, lines 39 –40).

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to consider the threshold value as user configurable in order to increase the network throughput when the collision is below the threshold (Abstract).

Regarding claims 10 and 14, Marsh discloses the reassignment channel. But, they fail to disclose *the value is an average of previously received incoming data rates at which other subscribers have requested reassignment from the first channel.*

However, Johnson teaches the threshold value is base on a count which the average of the counts for difference time period (Col. 5, lines 10 – 49). Which is the same function as described by the instant application.

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to consider the value as an average of received incoming data rate to indicate the current state of the network (Col. 5, lines 15 –16).

Regarding claim 11, Marsh discloses all the limitations of claim 11 except, *the step of, if the incoming data rate is significantly lower than the value, disregarding the incoming data rate at which the reassignment request was received.*

However, Taketsugu teaches the step of, *if the incoming data rate is significantly lower than the value, disregarding the incoming data rate at which the reassignment request was received* (Col. 5, lines 35 –42). If the data rate is below the threshold R1 the mobile entering the random access mode is considered as substantially the same as the function describes by the instant application.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Taketsugu into the teaching of

Marsh for the purpose of decreasing error rate in the transmission packet due to collision (Abstract).

Regarding claim 19, Marsh discloses all the limitation of claim 19, except the method of claim 4, further comprising the step of reassigning the subscriber from the new data channel back to the data channel when new bandwidth becomes available on the data channel or when the data channel is the least utilized data channel.

However, Zimmermann teaches the method of claim 4, further comprising the step of reassigning the subscriber from the new data channel back to the data channel when new bandwidth becomes available on the data channel or when the data channel is the least utilized data channel **(Page 2, [0023] –[0024])**.

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Zimmermann into the teaching of marsh for the purpose of determine interference strength values during a call connection for one or more channel pairs other than the channel pair momentarily carrying a call connection, such that a group of candidate channel pairs for potential channel switching is performed **(Abstract)**.

Regarding claim 20, Marsh discloses all the limitation of claim 20, except the method of claim 17, wherein the step of reassigning the subscriber to the first data channel occurs in response to the availability of new bandwidth on the first data channel or when the first data channel is the least utilized data channel.

However, Zimmermann teaches the method of claim 17, wherein the step of reassigning the subscriber to the first data channel occurs in response to the availability

of new bandwidth on the first data channel or when the first data channel is the least utilized data channel (**Page 2, [0023] –[0024]**).

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Zimmermann into the teaching of marsh for the purpose of determine interference strength values during a call connection for one or more channel pairs other than the channel pair momentarily carrying a call connection, such that a group of candidate channel pairs for potential channel switching is performed (**Abstract**).

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DADY CHERY whose telephone number is (571)270-1207. The examiner can normally be reached on Monday - Thursday 8 am - 4 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Q. Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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